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What is claimed is:

1. A high fidelity insert earphone comprising: receiver means for generating an acoustic output signal as a function of an input electrical signal, said receiver means including terminals for receiving an input electrical signal and an outlet for propagation of said acoustic signal therefrom, electrical coupling means for coupling said terminals to a source of electrical signals, acoustic coupling means for insertion into an entrance of an ear canal of a user and having a an opening therethrough, housing means including a chamber portion providing a chamber for said receiver means and including a tubular portion supported within said opening of said acoustic coupling means and defining a passage having an inlet end portion in communication with said outlet of said receiver means and an opposite outlet end portion for propagation of said acoustic signal into said earcanal, and acoustic damper means supported within said outlet end portion of said passage of said tubular portion.

2. A high fidelity insert earphone as defined in claim 1, said acoustic damper means comprising a tubular support member and a screen supported by said support member, said tubular support member being press-fitted into said outlet end portion of said passage, and said passage being formed with an internal shoulder engaged by one end of said tubular support member during installation of said acoustic damper means to limit movement toward said receiver means.

3. A high fidelity insert earphone as defined in claim 1, wherein said chamber portion of said housing means includes an outer wall in surrounding relation to said receiver means and an end wall from which said tubular portion projects.

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5 4. A high fidelity insert earphone as defined in claim 3, wherein said receiver means includes an output tube projecting from an end surface of said receiver means inserted into said inlet end portion of said passage of said housing means, and resilient mounting means positioned between said end surface of said receiver means and an inside surface of said end wall of said chamber means and also between an outer surface of said receiver means and an inner surface of said outer wall of said chamber portion.

10 5. A high fidelity insert earphone as defined in claim 4, said resilient mounting means being formed from a generally rectangular piece of a resilient sheet material having a central opening, and said output tube during installation of said receiver means being extended through said central opening and into said inlet end portion of said passage while said piece of sheet material is folded back around said receiver.

5 6. A high fidelity insert earphone as defined in claim 3, wherein an end section of said tubular portion of said housing means is of enlarged size to provide a external shoulder in facing relation to an outer surface of said end wall of said chamber portion, and wherein said acoustic coupling means includes a resilient material which in assembly is stretched over said end section to then expand into the space between said external shoulder and said end wall.

7. A high fidelity insert earphone as defined in claim 1, said housing means including a one-piece member of molded plastic defining said chamber portion and said tubular portion.

8. A high fidelity insert earphone as defined in claim 7, said one-piece member of said housing means including a wall at one end of said chamber portion from which said tubular portion projects, and said housing means further including an end cap member secured to said one-piece member at an opposite end of said chamber portion.

9. A high fidelity insert earphone as defined in claim 8, wherein said electrical coupling means includes a cable having conductors and a protective shield, means for physically connecting said shield to said end cap member, and means for electrically coupling said conductors and said terminals of said receiver means.

10. A high fidelity insert earphone as defined in claim 1, wherein said electrical coupling means includes a capacitor and a first resistor connected in series relation between said electrical signal source and one of said terminals of said receiver means, and a second resistor connected in parallel with the combination of said capacitor and said first resistor.

11. A high fidelity insert earphone as defined in claim 10, wherein said housing means further includes an end cap member for closing one end of said chamber portion, said capacitor and said first and second resistors being physically installed within said housing means between said end cap member and said receiver means.

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12. An earphone subassembly for providing a high fidelity earphone upon installation in an opening in an acoustic coupling means which is insertable into an entrance of an ear canal of a user and which is of any one of a number of different types including custom earmolds and ear tips of foam material, said earphone subassembly comprising: receiver means for generating an acoustic output signal as a function of an input electrical signal, said receiver means including an outlet for propagation of said acoustic signal therefrom, housing means including a chamber portion providing a chamber for said receiver means and including a tubular portion arranged to be supported within said opening of said acoustic coupling means and defining a passage having an inlet end portion in communication with said outlet of said receiver means and an opposite outlet end portion for propagation of said acoustic signal into said ear canal, and acoustic damper means supported within said outlet end portion of said passage of said tubular portion.

13. An earphone subassembly as defined in claim 12, said acoustic damper means comprising a tubular support member and a screen supported by said support member, said tubular support member being press-fitted into said outlet end portion of said passage, and said passage being formed with an internal shoulder engaged by one end of said tubular support member during installation of said acoustic damper means to limit movement toward said receiver means.

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14. An earphone subassembly as defined in claim 13, wherein said chamber portion of said housing means includes an outer wall in surrounding relation to said receiver means and an end wall from which said tubular portion projects.

5 15. An earphone subassembly as defined in claim
14, wherein said tubular portion of said housing means is
formed to provide a external shoulder in facing relation
to an outer surface of said end wall of said chamber
portion and arranged to receive a portion of said acoustic
coupling means of reduced cross-sectional size dimensioned
to be positioned between said wall portion of said housing
and said shoulder of said tubular portion to releasably
lock said housing means and said acoustic coupling means
10 together.

5 16. A method of making an earphone, comprising
the steps of providing a receiver including input
electrical terminals at one end and an acoustic outlet
tube projecting from an opposite end, providing an
acoustic damper including a tubular support and a screen
supported by said tubular support, molding from plastic a
housing member which includes a chamber portion for said
receiver and a tubular portion defining a passage
extending from said chamber, and installing said receiver
10 in said chamber to insert said outlet tube into one end of
said passage, and installing said acoustic damper in the
opposite end of said passage.

5 17. A method of making an earphone as defined
in claim 16, wherein said step of installing said receiver
includes the steps of providing a generally rectangular
piece of sheet material having a central opening,
extending said outlet tube of said receiver through said
opening prior to installing said receiver in said chamber,
and folding said sheet material back about said receiver
while moving said receiver into said chamber to foldably
wrap said sheet material about said receiver and provide a
10 resilient support for said receiver.

5 18. A method of making a earphone as defined in
claim 16, further including the steps of providing a cable
which includes a casing and conductors supported by said
casing, providing an end cap for said chamber portion of
said housing member, connecting said casing of said cable
to said end cap, coupling said conductors of said cable to
said input electrical terminals of said receiver prior to
installation of said receiver, and securing said end cap
to said housing member after installation of said receiver
10 in said chamber portion.

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5 19. A high fidelity insert earphone assembly
comprising a pair of insert earphones for insertion in
ears of a user, each of said insert earphones having
characteristics such as to require increased drive at
higher frequencies for optimum high fidelity reproduction,
and a cable assembly including a connector unit for
connection to sources of electrical signals, a junction
unit, a pair of separate cables of substantially equal
length connected between said junction unit and said
10 insert earphones, a common cable connected to said between
said junction unit and said connector unit, and a pair of
electrical coupling means in said junction unit coupled
between said common cable and said pair of separate cables
and arranged for providing increased response at high
15 frequencies.

20. A high fidelity insert earphone assembly as defined in claim 19, wherein each of said insert earphones includes receiver means for generating an acoustic output signal as a function of an input electrical signal, said receiver means including terminals for receiving an input electrical signal from one of said pair of cables, and an outlet for propagation of said acoustic signal therefrom, electrical coupling means for coupling said terminals to a source of electrical signals, acoustic coupling means for insertion into an entrance of an ear canal of a user and having a an opening therethrough, housing means including a chamber portion providing a chamber for said receiver means and including a tubular portion supported within said opening of said acoustic coupling means and defining a passage having an inlet end portion in communication with said outlet of said receiver means and an opposite outlet end portion for propagation of said acoustic signal into said earcanal, and acoustic damper means supported within said outlet end portion of said passage of said tubular portion, and means for coupling said

21. A high fidelity insert earphone assembly as defined in claim 19, wherein said electrical coupling means includes a capacitor and a first resistor connected in series relation between said electrical signal source and one of said terminals of said receiver means, and a second resistor connected in parallel with the combination of said capacitor and said first resistor.

